

PATENT**PENDING CLAIMS AS AMENDED**

Please amend the claims as follows:

1. (Previously Amended) A multi-frequency channel base station operating within a predetermined set of frequency channels wherein data components of forward link data are transmitted simultaneously on a plurality of frequency bands each band representing a frequency channel and having a carrier frequency, comprising:

a first transmission subsystem for transmitting a sync channel message on a single frequency channel of said predetermined set of frequency channels, wherein said sync channel message indicates one of a center frequency channel of a multi-channel system and a single channel system,

wherein the center frequency channel is used for reception of signals by a device receiving the sync channel message and is one of a set of preferred frequency channels that correspond to a plurality of frequency bands that are arranged such that any combination of three adjacent bands includes the center frequency channel; and

at least one additional transmission subsystem for transmitting remaining components of said forward link data on another frequency channel of said predetermined set of frequency channels.

2. (Cancelled)

3. (Previously Amended) The base station of Claim 1 wherein said sync channel message indicates the frequency channel of a single channel system in said predetermined set of frequency channels.

4. (Cancelled)

PATENT

5. (Previously Amended) The base station of Claim 1 wherein said sync channel message is transmitted on one of a the set of a preferred frequency channels wherein the number of channels is less than the number of channels in said predetermined set of frequency channels.

6. (Previously Amended) The base station of Claim 5 wherein said set of predetermined frequency channels are the set of frequency channels in a personal communications system block of frequency channels.

7. (Original) The base station of Claim 6 wherein the channel numbers of the set of preferred frequency channels are 75, 150 and 225.

8. (Previously Amended) A multi-frequency channel mobile station comprising:
a control processor for controlling the operation of a plurality of receiver subsystems in accordance with frequency information indicated in a received sync channel message, wherein said sync channel message indicates one of a center frequency channel of a multi-channel system and a single channel system,

wherein the center frequency channel is used for reception of signals by the mobile station and is one of a set of a preferred frequency channels that correspond to a plurality of frequency bands that are arranged such that any combination of three adjacent bands includes the center frequency channel;

a first receiver subsystem for receiving said sync channel message on a single frequency channel and for providing said sync channel message to said control processor and for receiving a first portion of a multi-channel signal; and

at least one additional receiver subsystem for receiving additional portions of said multi-channel signal.

9. (Previously Amended) The mobile station of Claim 8 wherein said control processor decides whether to operate in a single frequency channel mode or a multi-frequency channel mode and directs said first receiver subsystem to tune to a frequency channel indicated in said sync channel message for the reception of a single channel system when said mobile station

PATENT

decides to operate in a single frequency channel mode and directs said at least one additional receiver subsystem to tune to at least one additional frequency channel when said mobile station decides to operate in a multi-frequency channel mode.

10. (Previously Amended) The mobile station of Claim 8 wherein said control processor directs said first receiver subsystem to tune to one of a predetermined set of preferred frequency channels.

11. (Previously Amended) The mobile station of Claim 8 wherein said mobile station is operating within a personal communication system (PCS) set of frequency channels and wherein said predetermined set of preferred frequency channels consist of the frequency channel numbers 75, 150 and 225.

12. (Previously Amended) A method of transmitting data components of forward link data in a communication system, comprising:

transmitting a sync channel message on a single frequency channel within a predetermined set of frequency channels, wherein said sync channel message indicates one of a center frequency channel of a multi-channel system and a single channel system,

wherein the center frequency channel is used for reception of signals by a device receiving the sync channel message and is one of a set of a preferred frequency channels that correspond to a plurality of frequency bands that are arranged such that any combination of three adjacent bands includes the center frequency channel; and

transmitting remaining components of said forward link data on another frequency channel within said predetermined set of frequency channels.

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

PATENT

16. (Previously Amended) The method of Claim 12 wherein said sync channel message is transmitted on one of a set of a preferred frequency channels wherein the number of channels is less than the number of channels in said predetermined set of frequency channels.

17. (Previously Amended) The method of Claim 16 wherein said set of predetermined frequency channels are the set of frequency channels in a personal communications system block of frequency channels.

18. (Previously Presented) The method of Claim 17 wherein the channel numbers of the set of preferred frequency channels are 75, 150 and 225.

19. (Previously Amended) A method of receiving data components of forward link data in a communication system, comprising:

receiving a sync channel message and a first portion of a multi-channel signal on a single frequency channel, wherein said sync channel message indicates one of a center frequency channel of a multi-channel system and a single channel system,

wherein the center frequency channel is used for reception of signals and is one of a set of a preferred frequency channels that correspond to a plurality of frequency bands that are arranged such that any combination of three adjacent bands includes the center frequency channel;

controlling operation of a plurality of receiver subsystems in accordance with frequency information indicated in said received sync channel message; and

receiving additional portions of said multi-frequency channel signal on another frequency channel.

20. (Previously Amended) The method of Claim 19 further comprising deciding whether to operate in a single frequency channel mode or a multi-frequency channel mode and tuning to a frequency channel indicated in said sync channel message for the reception of a single frequency channel signal when deciding to operate in a single frequency channel mode and tuning to at least one additional frequency channel when deciding to operate in a multi-frequency channel mode.

PATENT

21. (Previously Amended) A multi-frequency channel base station operating within a predetermined set of frequency channels wherein data components of forward link data are transmitted simultaneously on a plurality of frequency bands each band representing a frequency channel and having a carrier frequency, said base station comprising:

means for transmitting a sync channel message on a single frequency channel within a predetermined set of frequency channels, wherein said sync channel message indicates one of a center frequency channel of a multi-channel system and a single channel system,

wherein the center frequency channel is used for reception of signals by a device receiving the sync channel message and is one of a set of a preferred frequency channels that correspond to a plurality of frequency bands that are arranged such that any combination of three adjacent bands includes the center frequency channel; and

means transmitting remaining components of said forward link data on another frequency channel within said predetermined set of frequency channels.

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Previously Amended) The base station of Claim 21 wherein said sync channel message is transmitted on one of a set of a preferred frequency channels wherein the number of channels is less than the number of channels in said predetermined set of frequency channels.

26. (Previously Amended) The base station of Claim 25 wherein said set of predetermined frequency channels are the set of frequency channels in a personal communications system block of frequency channels.

PATENT

27. (Previously Presented) The base station of Claim 26 wherein the channel numbers of the set of preferred frequency channels are 75, 150 and 225.

28. (Previously Amended) A multi-frequency channel mobile station comprising:
means for controlling the operation of a plurality of receiver subsystems in accordance with frequency information indicated in a received sync carrier message, wherein said sync channel message indicates one of a center frequency channel of a multi-channel system and a single channel system,

wherein the center frequency channel is used for reception of signals and is one of a set of a preferred frequency channels that correspond to a plurality of frequency bands that are arranged such that any combination of three adjacent bands includes the center frequency channel;

means for receiving said sync channel message on single frequency channel and for providing said sync carrier message to said means for controlling and for receiving a first portion of a multi-channel signal; and

means for receiving additional portions of said multi-frequency channel signal on another frequency channel.

29. (Previously Amended) The mobile station of Claim 28 wherein said means for controlling decides whether to operate in a single frequency channel mode or a multi-frequency channel mode and directs said first receiver subsystem to a frequency channel indicated in said sync channel message for the reception of a single frequency channel signal when said mobile station decides to operate in a single frequency channel mode and directs said at least one additional receiver subsystem to tune to at least one additional frequency channel when deciding to operate in a multi-frequency channel mode.

30. (Previously Amended) The mobile station of Claim 28 wherein said means for controlling directs said first receiver subsystem to tune to one of a predetermined set of preferred frequency channels.

PATENT

31. (Previously Amended) The mobile station of Claim 28 wherein said mobile station is operating within a personal communication system (PCS) set of frequency channels and wherein said predetermined set of preferred frequency channels consist of the frequency channel numbers 75, 150 and 225.

32. (Currently Amended) An apparatus operable in at least one of a single carrier system and a multi-carrier system, comprising:

a demultiplexer that demultiplexes a forward link signal into a forward link data stream comprising broadcast channel data including a sync channel message;

a first transmission subsystem, coupled to the demultiplexer, that transmits a first portion of the forward link data stream on a first carrier frequency;

a second transmission subsystem, coupled to the demultiplexer, that transmits a second portion of the forward link data stream on a second carrier frequency; and

a third transmission subsystem, coupled to the demultiplexer, that transmits a third portion of the forward link data stream on a third carrier frequency,

wherein the sync channel message is transmitted on a preferred channel by a selected one of the first, second and third transmission subsystems for transmission at a selected one of the first, second and third carrier frequencies, and

wherein the preferred channel is used for reception of signals by a device receiving the sync channel message and is one of a set of a preferred frequency channels that correspond to a plurality of frequency bands arranged such that any combination of three adjacent bands includes the preferred frequency channel.

33. (Previously Presented) The apparatus recited in claim 32, wherein the first transmission subsystem, comprises:

a first modulator that modulates the forward link data signal; and

a first up converter that receives modulated forward link data signal from the first modulator and up converts the modulated forward link data signal with the first carrier frequency to generate the first portion of the forward link data stream on the first carrier frequency.

PATENT

34. (Previously Presented) The apparatus recited in claim 33, wherein the second transmission subsystem, comprises:

a second modulator that modulates the forward link data signal; and

a second up converter that receives modulated forward link data signal from the second modulator and up converts the modulated forward link data signal with the second carrier frequency to generate the second portion of the forward link data stream on the second carrier frequency.

35. (Previously Presented) The apparatus recited in claim 34, wherein the third transmission subsystem, comprises:

a third modulator that modulates the forward link data signal; and

a third up converter that receives modulated forward link data signal from the third modulator and up converts the modulated forward link data signal with the third carrier frequency to generate the third portion of the forward link data stream on the third carrier frequency.

36. (Previously Presented) The apparatus recited in claim 35, wherein the forward link data stream, further comprises:

a pilot symbol stream;

dedicated channel data for a specific mobile station; and

a common channel message.

37. (Previously Presented) The apparatus recited in claim 36, wherein the common channel message comprises a plurality of common channel messages transmitted to at least a set of subscriber stations within a coverage area of the apparatus.

38. (Previously Presented) The apparatus recited in claim 32, wherein channel numbers of the preferred channel comprise at least one of 75, 150 and 225.

PATENT

39. (Previously Presented) The apparatus recited in claim 32, wherein the sync channel message is distinguished from other channels of information by being spread by a unique first predetermined code sequence.

40. (Previously Presented) The apparatus recited in claim 38, wherein the sync channel message is only transmitted by a selected one of first, second and third modulators.

41. (Previously Presented) The apparatus recited in claim 40, wherein the multicarrier system comprises a plurality of bands arranged such that any combination of three adjacent bands includes a preferred channel and wherein the sync channel message indicates the center frequency of a multi-carrier system in the current band of frequencies, if one exists.

42. (Previously Presented) The apparatus recited in claim 41, wherein the sync channel message indicates the frequency of a single carrier system in the current set of frequency bands, if one exists.

43. (Previously Presented) The apparatus recited in claim 36, wherein the first modulator that modulates the forward link data signal, comprises:

a first Walsh spreader that receives the pilot symbol stream and spreads the pilot symbol stream using a Walsh sequence.

44. (Previously Presented) The apparatus recited in claim 43, wherein the first modulator that modulates the forward link data signal, further comprises:

a first message formatter that receives the sync channel message and generates a first set of cyclic redundancy check (CRC) bits and appends the first set of CRC bits to the sync channel message to produce a formatted sync channel message;

a first encoder that encodes the formatted sync channel message with a first predetermined forward error correction coding algorithm and generates first encoded symbols;

a first interleaver interleaves the first encoded symbols with a first predetermined interleaving format to generate first reordered symbols; and

PATENT

a second Walsh spreader that receives the first reordered symbols and spreads the first reordered symbols in accordance with a first predetermined code sequence to generate a first Walsh spread signal.

45. (Currently Amended) The apparatus recited in claim 44, wherein the second modulator 52 that modulates the forward link data signal, comprises:

a second message formatter that receives the common channel message and generates a second set of cyclic redundancy check (CRC) bits and appends the second set of CRC bits to the common channel message to produce a formatted common channel message;

a second encoder that encodes the formatted common channel message with a second predetermined forward error correction coding algorithm and generates second encoded symbols;

a second interleaver interleaves the second encoded symbols with a second predetermined interleaving format to generate second reordered symbols; and

a third Walsh spreader that receives the second reordered symbols and spreads the second reordered symbols in accordance with a second predetermined code sequence to generate a second Walsh spread signal.

46. (Currently Amended) The apparatus recited in claim 45, wherein the third modulator 52 that modulates the forward link data signal, comprises:

a third message formatter that receives the dedicated channel data and generates a third set of cyclic redundancy check (CRC) bits and appends the third set of CRC bits to the dedicated channel data to produce a frame of dedicated channel data;

a third encoder that encodes the frame of dedicated channel data with a third predetermined forward error correction coding algorithm and generates third encoded symbols;

a third interleaver interleaves the third encoded symbols with a third predetermined interleaving format to generate third reordered symbols; and

a fourth Walsh spreader that receives the third reordered symbols and spreads the third reordered symbols in accordance with a third predetermined code sequence to generate a third Walsh spread signal.

PATENT

47. (Previously Presented) The apparatus recited in claim 45, further comprising:
a complex PN despreader that despreads the Walsh spread pilot symbol stream, the first
Walsh spread signal, the second Walsh spread signal and the third Walsh spread signal, with two
separately generated pseudonoise (PN) sequences to generate complex PN spread data; and
a transmitter that receives the complex PN spread data, and up converts, filters and
amplifies the complex PN spread data.